

宮城教育大学機関リポジトリ

# APEC Symposium on Environmental Education towards Sustainable Cities Asia Pacific Environmental Education Youth Forum

著者	青木 守弘, 小金澤 孝昭, 見上 一幸
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## **General Report**

on

### **APEC Symposium on Environmental Education towards Sustainable Cities Asia Pacific Environmental Education Youth Forum**

Morihiro AOKI \*, Takaaki KOGANEZAWA \* \* and Kazuyuki MIKAMI \*

#### **Preface**

The "APEC (Asia Pacific Economic Cooperation) Symposium on Environmental Education towards Sustainable Cities" was held at the Sendai International Center on September 20 and 21, 1998. This symposium was planned and organized by the Environment Agency of Japan and the City of Sendai. Prior to the APEC Symposium, Japanese and foreign university students here in Sendai took part in a forum, the "Asia Pacific Environmental Education Youth Forum," which was held as one of the supplementary events of the above symposium. Among participants of the symposium were Drs. Aoki, Mikami, and Koganezawa of the Environmental Education Center of Miyagi University of Education. They also took part in the forum as key coordinators. There is no doubt that the symposium and forum can be a great step towards our deep understanding of important issues and problems about environmental education. This volume contains (a) a paper read by Dr. Aoki as a "lead presentation" at the Round Table Discussion, (b) review papers of the youth forum by Drs. Mikami and Koganezawa, and (c) the minutes of the youth forum. (All the details of the symposium and forum are now on a web page, the address of which is on the final page of this volume.)

#### **Lead Presentation : The Configuration of Environmental Education and Approaches to Establishing a Recycling Oriented Society**

Examining the current status of environmental education and stating the points to be noticed when considering a natural resource circulation based society as the countermeasure for urban life environmental problems.

There is probably no one who would deny that environmental education is both necessary and beneficial. In fact, it seems almost as if environmental education has a social correctness that cannot be argued against. Just as democracy and pacifism are norms of 20<sup>th</sup> century society, we may be able to say that "environmentalism" was born as a new social norm at the turn of the 21<sup>st</sup> century. We hear the slogan "environmentally friendly" rising in a grand chorus everywhere: at schools, in local communities, even in industry and the distribution market. There is so much noise being made that we seem to be in the middle of something of a boom in caring about the environment. However, while we understand the importance of the issue in principle, when trying to come up with a decisive solution we simply face the dilemma between the ideal and the reality and have yet to carry out any effective action.

One important point about environmental education is that, whether the setting for it is school, home or community, different approaches should be taken in accordance with the age and stage of personal

\*Environmental Education Center, Miyagi University of Education, \*\*Social Studies Education, Miyagi University of Education

development. Rather than trying to confront people abruptly with environmental problems and nature conservation, it is more important to first try to create an appreciation at the more fundamental level of ecosystems and the global environment in general in which human society is based, and present the issues in the context of the broad relationship between the three elements of human beings, other forms of life, and the earth. In the case of very young children, the early approach should call their attention to a part of nature with which they are already familiar insects, flowers, and grass and lead them through the relationships between these to an understanding of more complex natural systems such as forests. The common pitfall is to immediately present children with a list of problems the world currently faces, such as global warming and acid rain, which involve a complex web of global issues. This abrupt approach results in a one-sided style of teaching that reverts to the old emphasis on knowledge acquisition, becoming nothing more than a shift from the former "true"/"false" type of lesson to a "goodies"/"baddies" one and not environmental education.

We receive wonderful reports from every corner of Japan about actions children are involved in, such as sorting garbage into cans, PET bottles and other material. We certainly have immense admiration for the teachers' splendid efforts in guiding these children. Yet, even while appreciating the efforts being made by schools and communities, these reports also leave me with a sense of futility. It is certainly true that government and industry are working on the problems, but I cannot help having the somewhat radical view that the children and local authorities are being left to clean up the results of insufficient action on the part of government and industry. To make matters worse, even though environmental education should be provided at every stage of personal development, it comes to a standstill in our schools at the junior high and senior high school level where it is met with cold indifference by educators who, at least in my opinion, will not allocate time for things such as environmental education because they have to prepare their students for the battle to pass entrance examinations.

Now, while becoming a resource recycling-oriented society sounds quite simple, how effectively can we solve environmental problems by these efforts? It is true that attracting students' attention to resource recycling is not all there is to environmental education. It is merely one of many goals. At the same time, Nature is not infinite. The Earth is a closed system, one in which a finite inventory of materials circulates in the environment of the earth's surface. We must understand that in this circulation system we call the Earth, large cities, concentrations of human population, pursuing intensively the human activities of production, consumption and disposal in order to maintain city life, enjoy a privileged existence. The balances that existed at various levels in the natural system have been ruined by the development of modern industrial technology in the cities and the continued expansion of those cities as production bases through the intensive consumption of energy resources. Even though we sing the praises of reducing the burden on the environment, of living harmoniously with nature, of having an amenable relationship with nature, we must remain conscious of the fact that maintaining the city function is in itself a stress on the natural environment.

We human beings are sometimes too egotistic and pursue technological and economic efficiency too much. These attitudes cause environmental problems which need solution far beyond our scientific ability. We must now shift our production activities to forms which operate on low material and low energy input. At the same time, we citizens must also change our attitudes to consumption. While much has been said, for instance, about the dangers of soft drinks, the reality is that we still see soft drink vending machines everywhere, and there is a vast variety of drinks sold in aluminum cans, steel cans, PET bottles and so on.

Do we really need such a huge variety of soft drinks? The fact is that sales competition is driven by purely commercial motives, luring consumers to buy more drinks than they really need. The result is a huge amount of garbage. The beverages business is, after all, a profitable one, and that means that it has been allowed to expand with virtually no controls over it. In effect, the industry is consuming mineral resources with no regard for the consequences, and an enormous amount of taxpayers' money is spent on treating the waste it generates. Whether the cans are steel or aluminum, a huge amount of effort and energy goes into excavating the rock, extracting the mineral, and processing the metal of which they are made. Consumers need to be educated in these basic facts.

Of all the environmental problems arising from city life, the most serious is the problem of industrial and domestic waste. We may develop state of the art treatment facilities, but until people's attitude to generating garbage has changed there will be no fundamental solutions. It has become natural for the average citizen to sort the paper out of their household garbage and put it out for collection separately. Surprisingly, however, at the incineration plant the two are burnt together: dry garbage, consisting of nothing but paper, is mixed in with kitchen garbage with dirty water dripping from it, a most unpleasant sight. It does not seem right for the paper we discarded so carefully to be treated like that. But, I suppose, this is a result of technological innovation: in modern incineration systems the paper is deliberately moistened with the liquid from the garbage. It seems to me an obvious waste of energy. I wonder if I am the only one who finds this development none too convincing.

"Eliminate Household Garbage." When I saw that slogan in the newspaper, I could not help exclaiming, "What a fraud!" Where does most of the household garbage come from? Most of it comes from the supermarkets and other shops. A home produces as much dry garbage, mostly paper and plastic, as it buys products. When you think about it, we are actually paying our own money to buy that garbage and support the package manufacturers, who in effect specialize in producing garbage. While we are trying to introduce the concept of a recycling oriented society through efforts such as sorting household garbage, the garbage itself is being mass produced with the usual mindless fixation on economic efficiency.

Although we talk about moving to a resource recycling oriented society as if it were a simple matter, urban environmental problems are deeply rooted in the fact that in order to maintain city life and keep industry going, we rely on intensive agriculture for raw materials and food. This is the cause of our environmental problems. If, then, we want our cities to have a low environmental impact, merely working on matters such as recycling and re-use, which can occur only at the very last stage of the cycle of production, consumption and disposal, is not the direction to take. We should be looking to establish a principle that constrains anything that generates garbage from being released in the market.

So long as we continue to approach city building by constructing concrete jungles, so long as populations continue to be concentrated in cities, the path to solving all our environmental problems will be much too long. We need to find an appropriate size and structure for our cities that takes full account of environmental assessments. Governments should begin to consider reducing pressure on the environment, so that cities will function, as early as when transportation routes, the arteries of production, for new developments are being planned. Regulations to reduce our impact on the environment should be put in place at that level. This will take some time to achieve, but I believe that it is necessary to educate citizens now so that they can adjust their lifestyles to comply with the shift when it does take place.

Environmental education should, therefore, especially in the schools, be more than a mere campaign. It should be a well designed course of basic teaching materials with the issues presented on a sound scientific

basis. I believe, furthermore, that the current school curriculum should be further examined and brought up to date where necessary. ( Written by Morihiro Aoki )

### **Review One: “The Asia Pacific Environmental Education Youth Forum ”**

In this forum, we focused particularly on summarizing the area in which environmental education plays an important role and on matters that require attention to clarify the actual situation of environmental education.

First, the students drew attention to “ Coexistence with Nature”. Participants gained knowledge about the self cleansing functions that the natural ecosystem has through the fieldwork at Gamo Tidelands. Then at a sewage treatment plant that artificially purifies water, the students realized, through comparing with the tidelands, that the human socio economic system is responsible for the destruction of the natural ecosystem. They also became conscious of the needs to purposely adjust the imbalance.

Secondly, the forum brainstormed about what the circulation based society ought to be. Although participants only had a concept of the waste issue through visitation to the incineration plant, they came to perceive the problem as an individual one. The large amount of waste they encountered made them feel responsible for the results of human activity. In addition, they brought up the question regarding our present way of manufacturing and consuming.

The last thing we addressed is the community planning that aims at coexistence with nature and the circulation based society. Through the workshop with the Ashinokuchi Elementary School pupils, they reaffirmed the importance of concrete discussion with regards to environment and life in each local community.

Participants themselves became more interested in the new aspects of environmental issues through the aforementioned activities. They then demonstrated their opinions at the Environmental Youth Conference which was held the next day. They comprehended that if they actually experience environmental issues or they view our daily life from different perspectives, their conceptual knowledge of “ environmental problems” will be seen from their own point of view.

Foreign participants showed that they came to know the characteristics of environmental issues in their own country as well as in Japan, and they realized that circumstances of economic development differ from each country and each one is facing different problems.

After that, the participants debated on the future of environmental education, considering the way of its concept and implementation. Participants put forward the necessity to recognize that our artificial environment changes itself in the course of manufacture, distribution and consumption. They also came to the conclusion that training at home, as well as in schools, in the local community and the mass media, will play a significant role in activating environmental education. In addition, they advanced the need for environmental education to be done according to each generation.

Listening to this discussion, I became sure that we should regard environmental education from various points of view and this is the first step for implementing environmental education.

( Written by Takaaki Koganezawa )

### **Review Two: “The Asia Pacific Environmental Education Youth Forum ”**

Participants of the Forum already had an interest in environmental education and shared a common awareness that the cycle of mass production, consumption, and disposal must be stopped because of its

enormous impact on the environment. While marveling at the latest facilities and the scale of the plant, they saw the amount of money and energy poured into treatment, which made them reconsider the current state of urban environment. Although the debates in Youth Conference on Environmental Education tended to focus on the mass disposal problem, participants developed a common awareness that the actions of each citizen are important. Students from various Asian nations reported on the current environmental problems in their countries: the fact that these nations have no choice but to depend on felling trees for fuel and the problems of desertification, population growth, and concentration of population in cities. Participants listened with grave concern to their presentations.

The Conference showed how little understanding adults have toward environmental problems and the lack of opportunity for adults to undergo environmental education. Furthermore, it demonstrated the importance of people developing more environment friendly habits in everyday living from childhood towards sustainable cities. Also, older children must learn about the circulation of matter on Earth and understand the whole flow of production, distribution, consumption, and disposal in developing sound environmental ethics. It was also pointed out that they must learn to interact with the beauty of nature and first develop a love for the Earth.

Since human beings must realize that they cannot live without depending on the Earth's resources and other forms of life, education should focus on the fact that environmental problems can ultimately be solved not by denying science, the bastion of civilization, but by human effort, including progress in Eco technology and others. Children should not be encouraged to deny their existence through overemphasis on the myopic egotism of human beings in the pursuit for greater convenience. It is also important to teach them that impact on the environment can be reduced by individual efforts and regional cooperation. One important aspect that was not discussed extensively in the Conference was the need in environmental education to build abilities to foresee potential environmental problems that are likely to occur in the future. (Written by Kazuyuki Mikami)

#### **Appendix :The Minutes of the " Asia Pacific Youth Conference" Part One :Presentations**

**Japanese Student A :** I think the point is that each of us should be more aware of the fundamental bases of environmental issues and to start building our own initiative to address these issues. Let me talk about my personal experience. I was so interested in environmental issues that I decided to major in an environmental education course at my university. However, few researchers or seniors are doing research on the area of environmental matters, and few classes on environmental issues are provided at my university. With this background, my peers and I are motivated to take concrete action on environment; we try to interact with other university students through the Internet. We also visited other universities to find some efficient way on how to deal with garbage on the campus. For example one university associated with a garbage collecting company collects used paper from the campus, and the company recycles it into toilet paper for the university buildings. Following these examples, we've just now started collecting PET bottles on the campus, and we hope to create other activities as well. In this way, I strongly feel that it is necessary for each of us to take voluntary actions and to develop support for environmental issues.

**Japanese Student B :** I went to Thailand recently to carry out a research about vegetation. I was very fascinated with the beautiful landscape and marine blue shallows. However, as I came to the residential area, such touching sights completely disappeared, and a dirty scene came to my sight. A strong stench coming

from the kitchen garbage spread throughout the area. I felt very sad to know the garbage from our advanced conveniences seriously contaminates our beautiful nature and landscape. I thought human beings are just like a "cancer of nature," that is, unsuitable for our ecosystem and destroying our surroundings. Then I even wondered "what an evil we are" and "what do we human beings exist for." I think environmental education should be regarded as the most important key to be more concerned with the problem of how our daily activities such as trashing garbage affects nature.

**Japanese Student C** : When we consider the environmental issues, we only think about waste. However I think that we cannot understand the whole issue without thinking about the manufacturing processes of products. Taking the case of manufacturing an aluminum can for juice, to refine bauxite produces five times as much industrial waste as aluminum. Then, the waste is treated in foreign countries. Therefore, we need to perceive environmental issues from these two basic facts of both manufacturing and distribution.

**South Korean Student A** : I'd like to talk about the "environment of water" and "Eco technology." We should not be allowed to use more than 0.01 of all the earth has. My personal opinion is that we should be far more careful about the use of such scarce, limited water. I think the main cause is sewage. The secondary cause is farming and stockbreeding. Farmers in China, Japan and South Korea use a relatively large amount of nitrogenous fertilizers compared with other Asian countries. Japan uses 5,000 tons of nitrogenous fertilizers. Of course, there must be other causes for the contamination of water.

Speaking of ideas to make water use environmentally friendly, for example, we can save 7,200l of water and 6.4kw of electricity, if we reduce the number of washing times of clothes from three times to twice. Another thing I would like to talk about is "Eco technology." Eco technology means a peaceful coexistence with both "natural ecosystem" and the "artificial ecosystem." So, Eco technology may make it possible that organisms and human products can circulate by themselves, and we humans live with nature altogether. This is the goal of "Eco technology."

In my opinion, environmental issues could not be solved only by the efforts of the scientists and environment related people. I think that it is essential to promote our own awareness of environmental problems. In South Korea, there is very little discussion about "Eco technology." Our living circumstances are so terrible. The fact is we are living under such terrible circumstances and polluted environment. These days, we Korean people are seriously discussing the environmental problems of pigpens and hormone disrupting substances.

**South Korean Student B** : I feel that the environment problems that we are experiencing in South Korea are quite similar with these in Japan. Let me talk about the waste issue and its solution in Korea. From the manufacturing viewpoint, there's a campaign called "Zero Emission." Zero Emission aims to reduce the waste at the stage of manufacturing. In support with waste reduction, we avoid over wrapping of goods. We are also using wrapping materials that are environment friendly. On the other hand, there are still people who dispose of their garbage carelessly. It is necessary for the consumers to exert extra efforts to improve the present situation. This is the "dilemma of modern society" which causes disappointments among environmentalists. After three years of preparation, the Korean government came up with a solution. They started a national campaign called, "Charge for Waste." As a result, consumers of supermarkets remove goods from their packaging and boxes when purchasing.

There are various aspects of the waste problem, such as "consumption," "distribution," "manufacturing," "waste," and "dumping." I am sure that environmental education will play an important role in raising our environmental awareness.

**Chinese Student A** : In China, the issue of population is the most serious one related to environmental issues. The population of China overall has exceeded 1.2 billions. Although the government adopted a "One Child Policy," this policy works well only in urban cities. This is a determinant of all other problems such as the fact that these billions of people consume a large quantity of energy.

Factory effluents are also another one of the matters. Some particular mills use drainage processing machines but others don't.

In addition, I personally believe that environmental education in developing countries is essential. We should exert efforts in raising environmental awareness of people in developing countries.

**Chinese Student B** : In my hometown, in Inner Mongolia, there used to be a lot of beautiful prairies and forests since the Genghis Khan Period of the 12<sup>th</sup> century. Some of them are still present today, but others are now impure.

For example, in Baotou City, one of the most important heavy industry cities in China, has caused much environmental pollution such as deforestation, desertification, and destruction of vegetation.

One more thing comes from Japanese society. I read an article stating that "Japanese Wooden Chopsticks Rob Chinese Forests." People in Japan use a huge amount of disposable wooden chopsticks. I think the Japanese should consider where that wood comes from.

Lastly, I have been thinking on how can we save the environment of my hometown. After going back to China, I'll do my best in promoting environmental education.

**Student from Myanmar** : There are many environmental problems that Myanmar is facing today. One of them is poverty. Because of poverty, education is not the basic concern of the society in my country. In this regard, the students are not environmentally aware. With this background, environmental issues are not a course for discussion among the Myanmar people. People especially the young are not conscious of what deforestation may yield in the future.

**Taiwanese Student** : One of the most serious problems in Taiwan is, I think, mass consumption. The situation of economic growth in Taiwan is very similar to that of Japan about 20 years ago. People recklessly keep consuming many products. They are not seriously much concerned about recycling. I think the present situation of consumers' attitudes is quite worrisome.

## **Part Two :Discussion**

Japanese Student C: I think we must realize that our daily activities such as dumping garbage without any classification cause a lot of trouble at the incineration plants.

**South Korean Student A** : Talking about incineration, I'd like to address the issue of dioxin. In my understanding, it is difficult for dioxin to be chemically broken down, and it would be accumulated at the higher level. Although it is said that dioxin doesn't cause serious problems, I am afraid that it might be



dangerous in a decade or two.

**Chinese Student B :** I suppose that it's very important for us to reduce the amount of waste. As one example, people in France do not use any shopping bags because they bring baskets from their home. This would reduce the manufacturing of plastic products , particularly plastic bags.

**Japanese Student D :** It's necessary to take action against environmental issues, personally, ethically. However, I think legal regulations or taxation are also necessary because I understand that environmental pollution from enterprises and factories has been decreased due to the fact that they've been controlled by law or taxation.

**Japanese Student B :** Admittedly, I realize the importance of such legal regulations and taxation. But I think, first of all, we should do our best in educating about the effect of our actions on our environment, and if it's not effective, we could establish some laws and taxation as a secondary measure.

**Japanese Student C :** I think it is wrong way to regard ethics and laws as opposite ones.

**Japanese Student E :** Let me take an example. Germany has advanced the area of environmental education. They start environmental education from an early age as training. Therefore, not only pupils but also parents as well are becoming more aware of their surrounding environment, ethically, or even naturally.

**Japanese Student F :** Now, how can we be kind to our environment? I think to behave kindly to our environment is the same as we behave to people. I mean, we can't be kind to people whom we don't like. So we at first should come to like the earth, nature and understand our surrounding environment.

**Japanese Student G :** Relating to his opinion, I think if people like their surroundings, they naturally become careful about the environment. I know surfers are involved in activities to save the sea because they like the ocean. Mountain climbers are doing the same kind of thing in mountains.

**Japanese Student H :** I wonder if we are sort of forcing children to do things we want them to do by advising or supporting them. Instead of that, I think we should encourage the children to join us in the planning and implementation of our activities.

**Japanese Student C :** I think that environmental education should not be implemented on a pro and con type basis alone , but it should be carried out thinking of the reason why it is positive or negative.

**Chinese Student A :** It is important that we raise the environmental awareness of not only developed countries but also developing countries.

**South Korean Student B :** We should start by making people aware of the waste and stench created by the Minami Gamo Sewage Treatment Plant and the Kuzuoka Incineration Center that we visited yesterday.

**Japanese Student A :** I think we should teach as many people as we can about our beautiful nature and show the dark side of the results of our human activities. Then, we should teach what we can do and what we cannot do now. And, I would like to teach it from different perspectives.

( Edited by T.Koganezawa , K.Mikami )

**# Reference Provision of Information on APEC and Youth Forum through the Internet**

Detailed information on the aforementioned events is now being provided all over the world from the web site of the Environmental Education Center, M.U.E. This web page consists not only of "Text" information but also of "Streaming Video" as well, which was recorded during the Asia Pacific Youth Conference on Environmental Education. Allowing for viewers overseas, the streaming video is produced with English interpretation. The address of the web site is as follows. We look forward to your visits.

Thank you.

Environmental Education Center, Miyagi University of Education

**<http://www.miyakyo-u.ac.jp/lab/env/project/apec/index-e.html>**

# A P E C

ASIA PACIFIC ECONOMIC COOPERATION

—Symposium on Environmental Education towards Sustainable Cities—

[Japanese](#) / [English](#)

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On August 21 & 22, the researchers of the Environmental Education Center participated in the **"Asia-Pacific Environmental Education Youth Forum"** as coordinators associated with the Sendai City government. Then on September 20 & 21, the professors also took part in the **"APEC Symposium on Environmental Education towards Sustainable Cities"** held here in Sendai. The information is on this web page, including [movies](#).

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[Schedule](#)

all of the information on this symposium



Real video

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the information on the "Asia-Pacific Environmental Education Youth Forum" including [movies](#)

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the information on the "APEC Symposium on Environmental Education towards Sustainable Cities"

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